

RCRA CONTINGENCY PLAN
Implementation Report No. 93-003

**RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER CO7890010526**

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264.56 (j) and 265.56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

- (1) Name, address, and telephone number of the owner or operator
- (2) Name, address, and telephone number of the facility
- (3) Date, time, and type of incident (fire, explosion)
- (4) Name and quantity of material(s) involved
- (5) The extent of injuries, if any
- (6) An assessment of actual or potential hazards to human health and the environment, where this is applicable; and
- (7) Estimated quantity and disposition of recovered material resulted from the incident."

(1) Name, address and telephone number of the owner of the facility:

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
A. H. Pauole, Acting Manager

(2) Name, address and telephone number of the facility:

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

(3) DATE, TIME AND TYPE OF INCIDENT

A. SUMMARY

The RCRA Contingency Plan was implemented on March 18, 1993, due to a release of greater than one pint/one pound of sulfuric acid to an asphalt surface in a lay down yard located north of Building 130 at the Rocky Flats Plant. The release occurred at approximately 11:41 a.m. when three used lead-acid batteries fell from a pallet while being transported by a Logistics Property Utilization and Disposal (PU&D) forklift operator. The batteries, which were shrink-wrapped per industry standard, were being moved back and forth from a weigh scale on the south side of Building 130 to a cargo container located in a multi-purpose receiving and storage yard on the north side of the building where they were being stored for recycling. During transit, the load of batteries shifted when the forklift operator apparently hit a bump in the asphalt as he was turning into the storage yard, resulting in one of the batteries falling off the pallet into the path of the forklift wheels. The operator was unable to see the fallen battery and ran over and crushed it with the forklift wheels. When the forklift struck the battery, it resulted in a jolt causing two additional batteries to fall from the pallet. The crushed battery and one of the additional two batteries released a combined total quantity of approximately 2 to 4 quarts of sulfuric acid covering about a 2' X 15' area on the asphalt surface and the forklift's front wheels and forks.

When the forklift operator became aware of the problem, he immediately stopped the forklift and attempted to stabilize the situation. Wearing appropriate Personal Protective Equipment (PPE), operators restored the two fallen batteries to an upright position on the pallet. The Fire Department Hazardous Materials (HazMat) Team responded to the scene at approximately 11:47 a.m. The area was roped off and all personnel near the incident and within 300 feet upwind from the spill were evacuated. Readings with a pH meter were taken at three different locations of the spill, and it was determined that the acid had a pH of zero. These readings were used to make the determination that the material was a RCRA-regulated hazardous waste for the characteristic of corrosivity (D002). Process knowledge of previous characterizations of lead-acid batteries was used to make the determination that the material was also a RCRA-regulated hazardous waste for the characteristic of toxicity for lead (D008). Sodium bicarbonate was placed on the spill, around the pallet where the damaged batteries were originally and on the forklift's front wheels and forks to neutralize the acid. The waste materials were picked up, double bagged and placed into a five-gallon black Department of Transportation (DOT) approved drum and placed in a 90-day accumulation area. The two damaged batteries were placed into a 20-gallon "lab pack" and were placed with the remaining batteries on the pallet awaiting vendor pickup. Water was used to decontaminate the HazMat equipment to a pH of 7. The water was transferred via pump to drums to await final treatment in the process waste system in Building 374.

The RCRA Contingency Plan was implemented at 12:10 p.m. on March 18, 1993, by the Shift Superintendent upon notification of the incident.

B. DESCRIPTION OF INCIDENT

At approximately 11:41 a.m. on March 18, 1993, three used lead-acid batteries fell from a pallet while being transported by a Logistics PU&D forklift operator from a weigh scale on the south side of Building 130 to a multi-purpose receiving and storage yard on the north side of Building 130. The batteries were being moved back and forth from the weigh scale to a cargo container where they were being stored for recycling. During transit, the load of batteries shifted when the forklift operator apparently hit a bump in the asphalt as he was turning into the storage yard, resulting in one of the batteries falling off the pallet. The operator was unable to see the fallen battery and ran over and crushed the battery with the forklift wheels. The resulting jolt caused two additional batteries to fall from the pallet. At approximately 11:42 a.m. the Building 130 Warehouse manager was notified and at the same time the Shift Superintendent and the Fire Department were notified. The Fire Department HazMat team arrived at the scene at approximately 11:47 a.m. It was estimated that the crushed battery and one of the additional two batteries released approximately 2 to 4 quarts of sulfuric acid covering about a 2' X 15' area on the asphalt surface. The forklift's front wheels and forks were also contaminated with acid. At approximately 11:58 a.m., pH readings were taken of the spilled acid and the pH was found to be zero. At approximately 12:37 p.m., the acid was neutralized with sodium bicarbonate. At approximately 2:30 p.m., a decision was made on the disposition of the spill and equipment by Industrial Hygiene and Hazardous Waste personnel. At approximately 3:45 p.m., the HazMat team was released and the material was placed into a 90-day accumulation area.

C. CORRECTIVE ACTION

The PU&D department will review the wrapping and packaging procedure to see if a more secure method of packaging these batteries can be found to reduce the risk of this incident being repeated.

A desk reference procedure is in the process of being written for PU&D personnel to outline precautions in transporting these batteries.

(4) NAME AND QUANTITY OF MATERIAL INVOLVED

Approximately 2 to 4 quarts of sulfuric acid (D002) and lead (D008) were released onto an asphalt surface. Process knowledge was used to characterize the material released based on previous analysis of similar lead-acid batteries showing lead levels as high as 20 parts per million (ppm). Approximately 5 gallons of sodium bicarbonate was used to neutralize the acid and pick up the spilled solution. The resulting spoils are being handled as hazardous waste and were placed in a 90-day accumulation area.

(5) EXTENT OF INJURIES

There were no injuries to personnel.

(6) AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT

The amount of RCRA-regulated hazardous waste material that was released to the asphalt surface in this incident (approximately 2 to 4 quarts of neutralized sulfuric acid contaminated with lead) was neutralized with sodium bicarbonate and does not present a significant actual or potential threat to human health or the environment.

(7) ESTIMATED QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT

The neutralized sulfuric acid containing lead (D008, based on process knowledge from analysis of similar lead-acid batteries showing lead levels as high as 20 ppm) was picked up, double bagged and placed in a five-gallon black DOT approved drum and, due to the lead contamination, it was placed in a 90-day accumulation area. The two damaged batteries were placed into a 20-gallon "lab pack" and placed with the remaining batteries on the pallet awaiting vendor pick up. Water was used to decontaminate the HazMat equipment, a pH of 7 was confirmed and approximately 30 gallons of water was transferred via pump to drums to await final treatment in the process waste system in Building 374.